

Nov 27.
To ship ~~Dec 11~~ or Sooner.

Work Order ID 138553

138553

Page 1

November 02, 2015 2:03:36 PM

Item ID: D4410-043 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: Co-Pilot Collective Head Assembly (212)
Start Date: 11/2/2015 Start Qty: 2.00 *P* 1 SH
Required Date: 11/23/2015 Req'd Qty: 2.00 *P* 1 SH
Reference: Cust Item ID:
Customer:

Approvals: Process Plan: SH Date: 20151102 Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr								
D4410	E								

110 Weld per dwg A/R Aluminum rod Batch: 1121578 0.00

110

Large Fab

Memo

0.05

Large Fab

WELD D4410-7, D4410-1 & D4410-15 AS PER DWG

GRIND WELD FLUSH WHERE INDICATED AS PER DWG.

1 15-11-24

120 QC9- Inspect visual per QSI004- Fusion Welds 0.00

120

QC

Memo

0.00

Quality Control

① 15-11-24 DAS
9
9-89

130 QC5- Inspect part completeness to step on W/O 0.00

130

QC

Memo

0.00

Quality Control

① 15-11-24 DAS
9
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

Work Order ID 138553***138553***

Page 2

November 02, 2015 2:03:36 PM

Item ID: D4410-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Co-Pilot Collective Head Assembly (212)
Start Date: 11/2/2015 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 11/23/2015 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
140									
Outsource4	Memo	6.00							
Outsource process - Anodize	Issue P/O: <u>30559</u>								
	Black Anodize as per Dwg D4410								
	C OF C IREQUIRED								
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									
160	QC3- Inspect Part Finish	0.00							
160									
QC	Memo	0.00							
Quality Control									

CL 153/11/30

1 X SP15-11-20

DAS
38
9-00
NOV 26 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
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Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER :																			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter		☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes		☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center		☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence	
				OTHER :							

Work Order ID 138553***138553***

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November 02, 2015 2:03:36 PM

Item ID: D4410-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Co-Pilot Collective Head Assembly (212)
Start Date: 11/2/2015 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 11/23/2015 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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200	QC21- Final Inspection - Work Order Release	0.00							
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200

QC	Memo	0.00							
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Quality Control

MLD 15-11-26
ML5 15-11-26

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Picklist Print

November 02, 2015 2:03:48 PM

Page 1

Work Order ID: 138553

138553

Parent Item: D4410-043

D4410-043

Parent Item Name: Co-Pilot Collective Head Assembly (212)

Start Date: 11/2/2015

Required Date: 11/23/2015

Start Qty: 2.00

Required Qty: 2.00

Comments:

IPP REV:A NEW ISSUE 11-11-02 JLM VERIFIED BY:DD IPP
REV:B AS PER REV:PB6 12/08/10 JFS VERIFIED BY:JLM IPP REV:C
AS PER REV:PB10 12/09/20 JFS VERIFIED BY:DD IPP REV:D 14.04.08
DWG REV:C DD VERF:JLM IPP REV:E 15.07.02 AS PER
DWG REV:E DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4410-1

Manufactured No

Each 2.0000

2

D4410-1

Co-Pilot Collective Head

**

EL 15-11-24

137259 x1

Location

WA001

Loc Qty

2

Loc Code

136296

2

D4410-7

Manufactured No

110

Each

9.0000

1

2

D4410-7

Conduit

**

EL 15-11-24

Location

WA002

Loc Qty

9

Loc Code

116456

9

D4410-13

Manufactured No

170

Each

10.0000

1

2

D4410-13

Shim (212)

**

NOV 26 2015

Location

ST096

Loc Qty

10

Loc Code

136836

10

D4410-15

Manufactured No

110

Each

3.0000

1

2

D4410-15

Rear Cover

**

EL 15-11-24

Location

WA002

Loc Qty

3

Loc Code

116588

3

Picklist Print

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Page 2

Work Order ID: 138553

138553

Parent Item: D4410-043

D4410-043

Parent Item Name: Co-Pilot Collective Head Assembly (212)

Start Date: 11/2/2015

Required Date: 11/23/2015

Start Qty: 2.00

Required Qty: 2.00

D4413-1 Manufactured No

170 Each 69.0000 1 2

D4413-1

Dome Plug

NOV 26 2015

Location

Loc Qty

Loc Code

ST096

69

91375

69

90296A108

Purchased No

170 Each 454.0000 4 8

90296A108

Heli-Coil Insert

FF

NOV 26 2015

Location

Loc Qty

Loc Code

GA

280

m132757

280

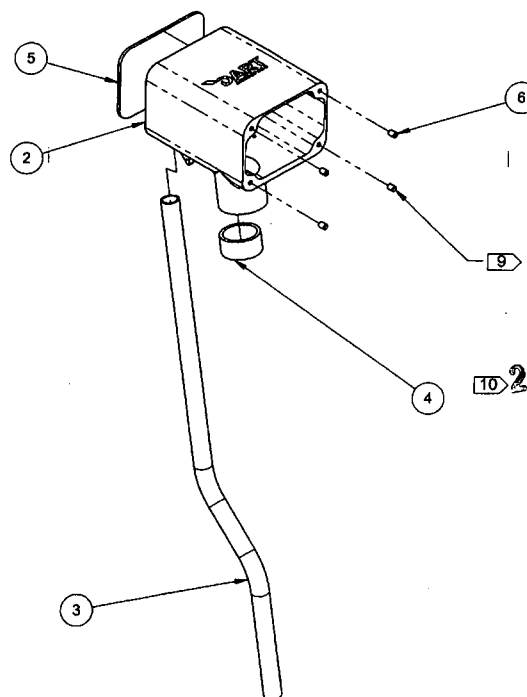
ST564

174

m128972

174

ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION
1	X	D4410-041	CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)
2	1	D4410-1	CO-PILOT COLLECTIVE HEAD
3	1	D4410-7	CONDUIT
4	1	D4410-11	205 SHIM
5	1	D4410-15	REAR COVER
6	4	90296A108	HELI-COIL INSERT (6-32 X 0.276)



RELEASED

2015 JUL 02 ECU 15-577
A.P.

20151102

D4410-041 WELDING DETAIL

REV.	DESCRIPTION	BY	DATE
E	REVISE DIMS, ZN D5-7, D6-7, D7-4, C6-4, D6-4, C8-4, D5-4, C6-5, B7-6, B8-6, B4-6, C4-6, B6-7, B5-7, C4-7, ADD DIM D5-9, REMOVE PIN FROM BOM, ZN D5-1, D5-2, D5-3, REVISE NOTES, ZN A8-2, A8-3, A8-4, REVISE NECK LENGTH AND REMOVE MOUNTING HOLE, ZN C8-4, REMOVE MOUNTING HOLE, ZN C5-10, C5-11	VS	15.05.28
D	REVISE TRIGGER SHAPE, ZN A5-9, REVISE C'BORE, ZN A6-4, REVISE HOLE DIM, ZN D5-6	VS	14.10.14
C	ADD HOLE DIM, ZN C6-7, UPDATE LOGO, ZN C2-5, UPDATE NOTE 8, ZN A8-5, REVISE CAPTION, ZN B2-1, ADD WELDING DETAIL, ZN C2-2, ZN C2-3	VS	14.02.20
B	ADD C'BORE, ZN A4-2, ENLARGE HOLES, ZN C5-3 & B8-3, UPDATE LOGO, ADD -045/11/13/15, ROTATE HOLE, ZN C3-2, INCREASE 7 DIAMETER, ZN C1-8, REMOVE -9 FROM -041 ASSEMBLY, ZN C5-1	DC	12.07.30
A	NEW ISSUE	DC	11.06.06

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.57 lbs
- 8) WELD PER DART QSI 004
- 9) INSTALL AFTER ANODIZING
- 10) INSTALL AFTER ANODIZING WET WITH PROSEAL 890 OR EQUIVALENT ENSURE THAT PROSEAL DOES NOT CONTACT PIN

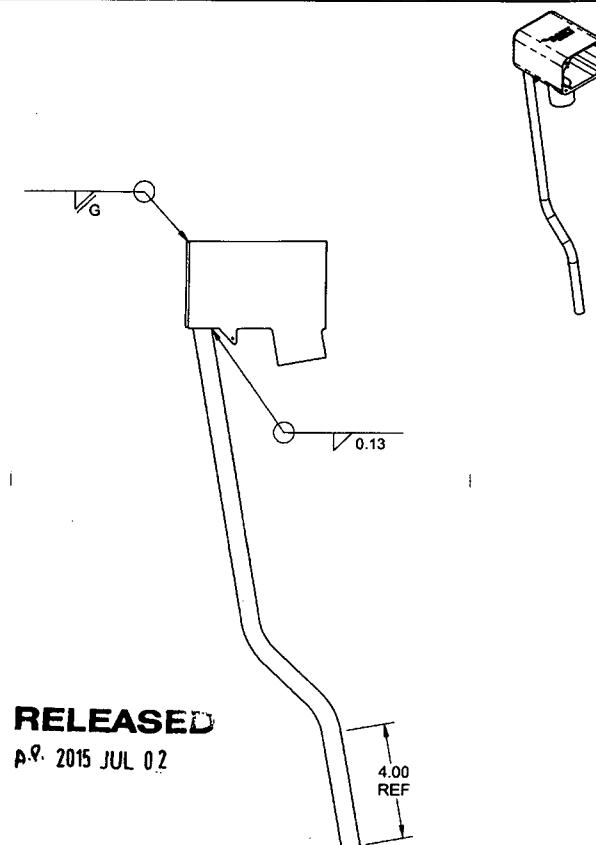
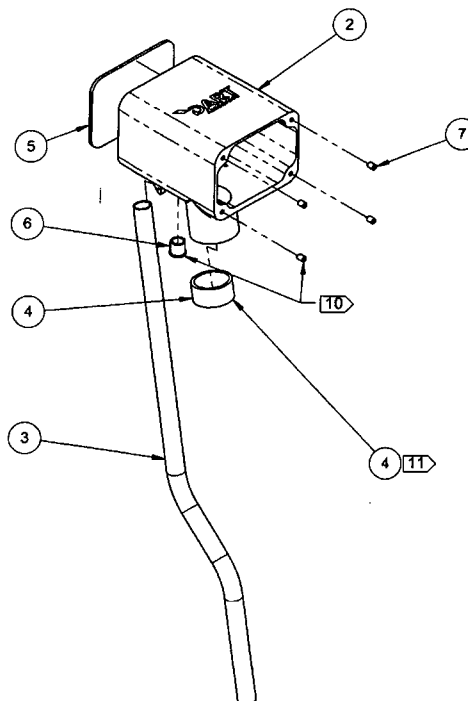
D4410-041 CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)

APPROVED

5H 138553

DESIGN	VS	DART AEROSPACE USA, INC.	
DRAWN	VS	KENT, WA	
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	EPDMA	D4410	SHEET 1 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	D8	CO-PILOT COLLECTIVE HEAD	NTS
DATE	15.05.28	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

ITEM NO.	QTY. -043	PART NUMBER	DESCRIPTION
1	X	D4410-043	CO-PILOT COLLECTIVE HEAD ASSEMBLY (212)
2	1	D4410-1	CO-PILOT COLLECTIVE HEAD
3	1	D4410-7	CONDUIT
4	1	D4410-13	212 SHIM
5	1	D4410-15	REAR COVER
6	1	D4413-1	DOMES PLUG
7	4	90296A108	HELI-COIL INSERT (6-32 X 0.276)



RELEASED

APR 2015 JUL 02

D4410-043 WELDING DETAIL

NOTES:

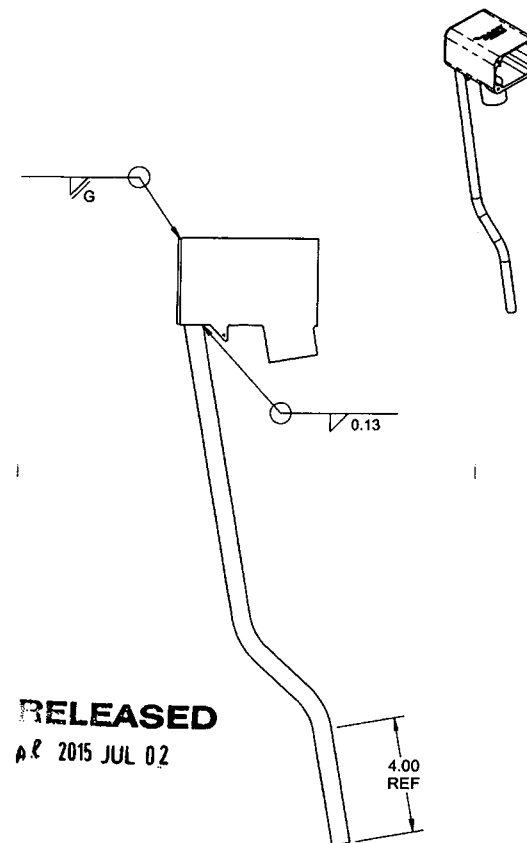
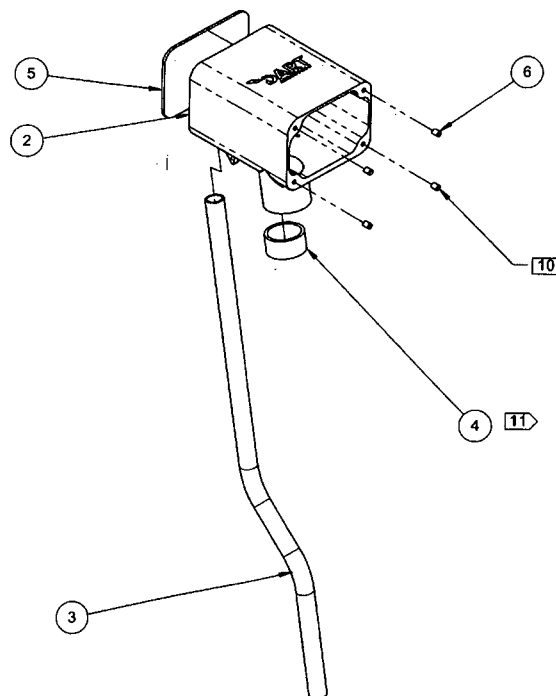
- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.57 lbs
- 8) WELD PER DART QSI 004
- 9) INSTALL AFTER ANODIZING
- 10) INSTALL AFTER ANODIZING WET WITH PROSEAL 890 OR EQUIVALENT ENSURE THAT PROSEAL DOES NOT CONTACT PIN

D4410-043 CO-PILOT COLLECTIVE HEAD ASSEMBLY (212)

APPROVED

DESIGN	VS	DART AEROSPACE USA, INC.	
DRAWN	VS	KENT, WA	
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	EPDMA	D4410	SHEET 2 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD NTS	
DATE	15.05.28	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC.	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			

ITEM NO.	QTY. -045	PART NUMBER	DESCRIPTION
1	X	D4410-045	CO-PILOT COLLECTIVE HEAD ASSEMBLY (EAGLE SINGLE)
2	1	D4410-1	CO-PILOT COLLECTIVE HEAD
3	1	D4410-7	CONDUIT
4	1	D4410-13	212 SHIM
5	1	D4410-15	REAR COVER
6	4	90296A108	HELI-COIL INSERT (6-32 X 0.276)



RELEASED
AR 2015 JUL 02

D4410-045 WELDING DETAIL

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2 AFTER WELDING
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.57 lbs
- 8) WELD PER DART QSI 004
- 9) INSTALL AFTER ANODIZING
- 10) INSTALL AFTER ANODIZING WET WITH PROSEAL 890 OR EQUIVALENT ENSURE THAT PROSEAL DOES NOT CONTACT PIN

D4410-045 CO-PILOT COLLECTIVE HEAD ASSEMBLY (EAGLE SINGLE)

APPROVED

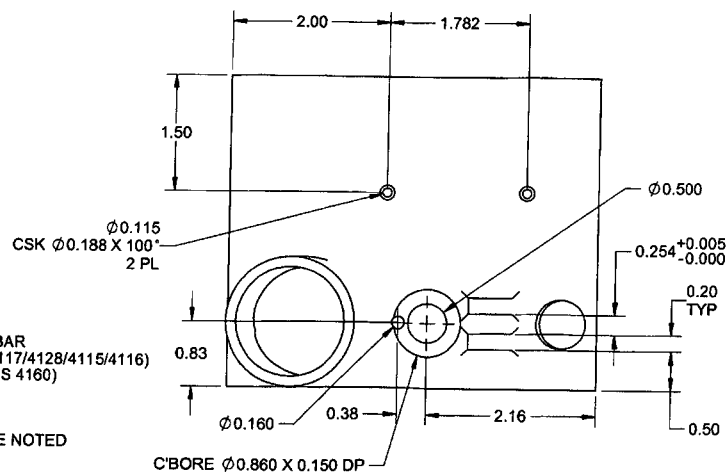
DESIGN	VS	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	VS		
CHECKED	RF	DRAWING NO. D4410	REV. E SHEET 3 OF 12
MFG. APPR.	EPDMA	TITLE CO-PILOT COLLECTIVE HEAD	SCALE NTS
APPROVED	HS	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	
DE APPR.	DS		
DATE	15.05.28		

RELEASED

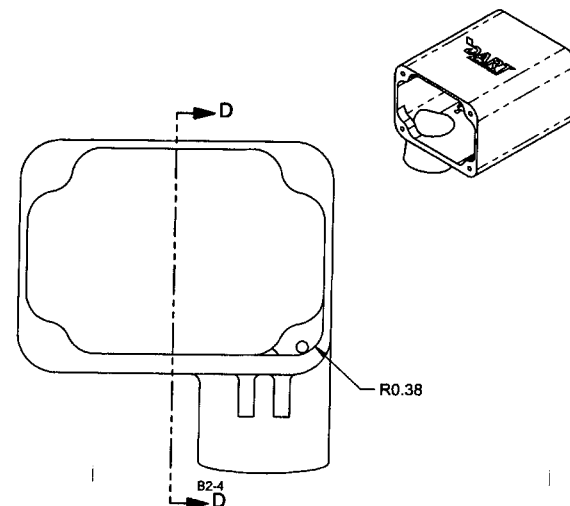
A.L. 2015 JUL 02

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR
QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
OR ASTM B211 OR ASTM B221
REF. DART SPEC. M6061T6B4.000X3.000
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 1.26 lbs

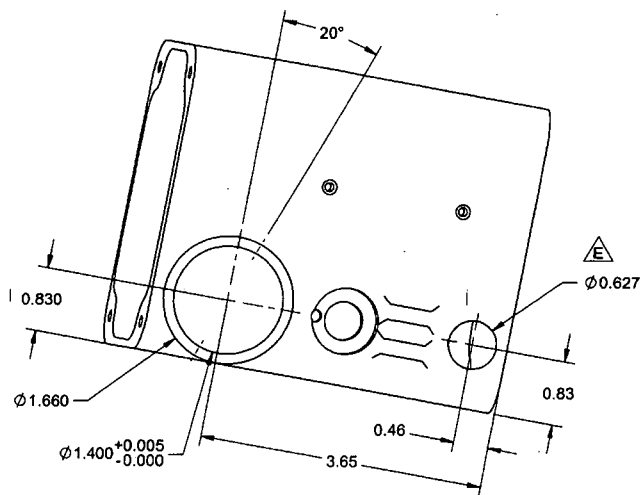


D4410-1 CO-PILOT COLLECTIVE HEAD

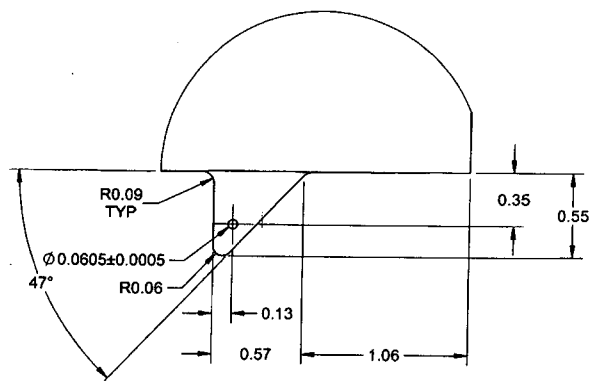


SECTION D-D
D2-4

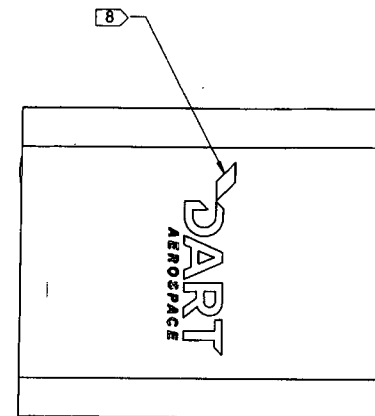
DESIGN	VS	DART AEROSPACE USA, INC.	
DRAWN	VS	KENT, WA	
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	EPDMA	D4410	SHEET 4 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
DATE	15.05.28	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC.	
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VIEW A-A
C5-4



DETAIL B
C4-4



VIEW C-C
D4-4

**D4410-1 CO-PILOT COLLECTIVE HEAD
DETAIL VIEWS**

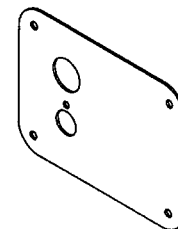
RELEASE
A.P. 2015 JUL 02

NOTES:

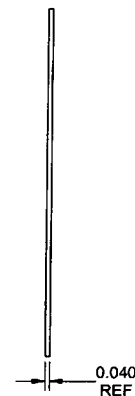
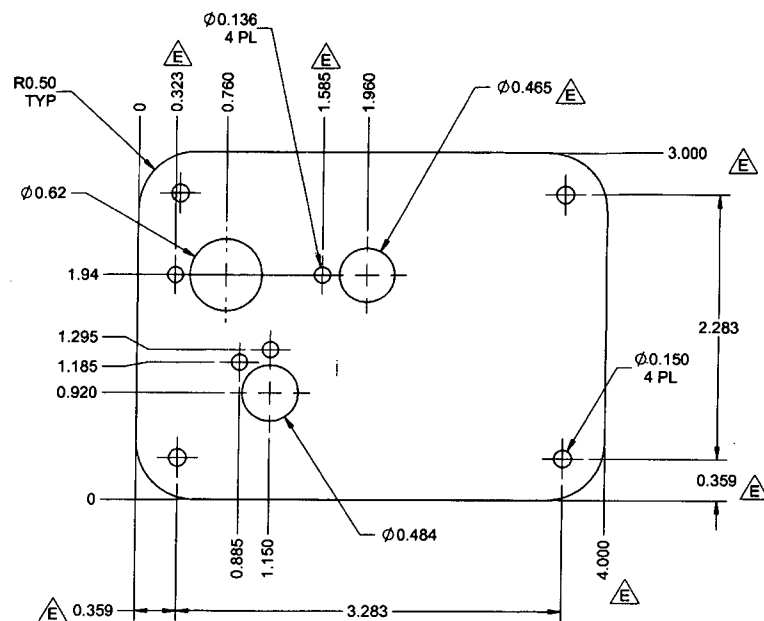
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) ENGRAVE "DART" LOGO AS SHOWN 0.003 - 0.005 DP.

APPROVED

DESIGN	VS	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	VS		
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	EPDMA	D4410	SHEET 5 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
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APPROVED	DESIGN	VS	DART AEROSPACE USA, INC.	
	DRAWN	VS	KENT, WA	
	CHECKED	RF	DRAWING NO.	REV. E
	MFG. APPR.	EPDMA	D4410	SHEET 6 OF 12
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	CO-PILOT COLLECTIVE HEAD NTS	
	DATE	15.05.28		
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D4410-5 FACE PLATE

NOTES:

1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.040 THK
 QQ-A-250/11 OR AMS-QQ-A-250/11
 OR AMS 4025 OR AMS 4027
 OR ASTM B209

REF. DART SPEC. M6061T6S.040

2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1

7) WEIGHT: 0.04 lbs

RELEASE

AR 2015 JUL 02

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DESIGN	VS	DART AEROSPACE USA, INC.	
DRAWN	VS	KENT, WA	
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	EPDMA	D4410	SHEET 7 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
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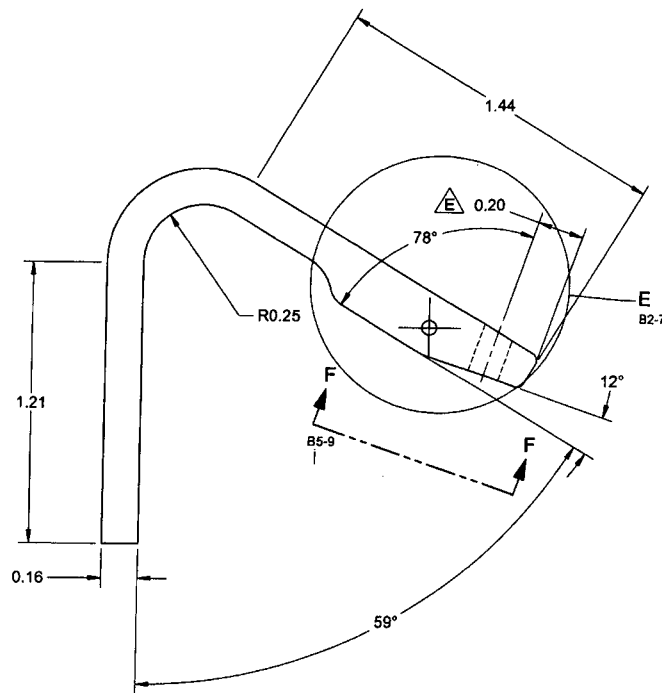
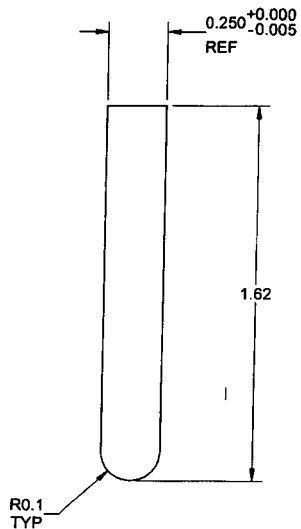
D4410-7 CONDUIT

RELEASE
 2015 JUL 02

- NOTES:**
- 1) MATERIAL: 6061-T6 OR 6061-T62 ALUMINUM TUBING PER
 WW-T-700/6 OR AMS 4080 OR AMS 4082
 OR QQ-A-200/8 OR QQ-A-225/8
 REF. DART SPEC. M6061T60.625W.050
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
 - 7) WEIGHT: 0.17 lbs

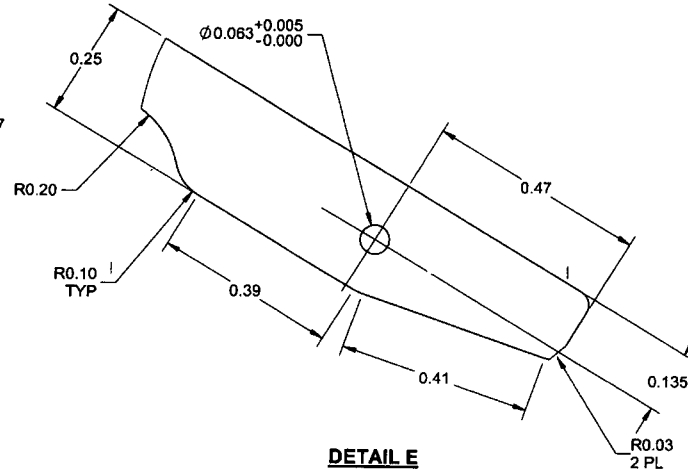
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DESIGN	VS	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	VS		
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	EPDMA	D4410	SHEET 8 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
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VIEW F-F
C5-9

#8-32 TAPPED HOLE



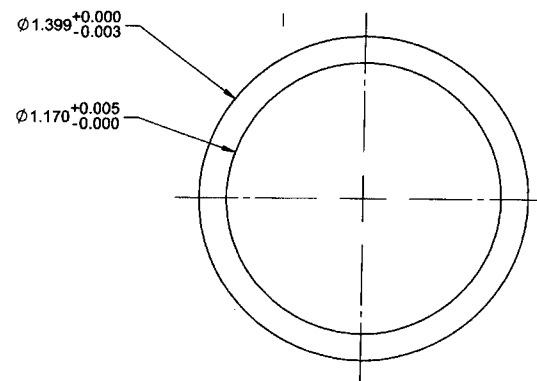
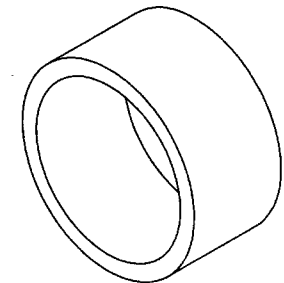
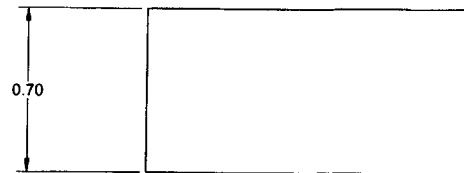
DETAIL
C4-7

- NOTES:**
- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.250 THK
QQ-A-250/11 OR AMS-QQ-A-250/11
OR AMS 4025 OR AMS 4027
OR ASTM B209
REF. DART SPEC. M6061T6S.250
 - 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
 - 7) WEIGHT: 0.01 lbs

D4410-9 TRIGGER

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A.P. 2015 JUL 02

DESIGN	VS	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	VS		
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	EPDMA	D4410	SHEET 9 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
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D4410-11 205 SHIM

RELEASED

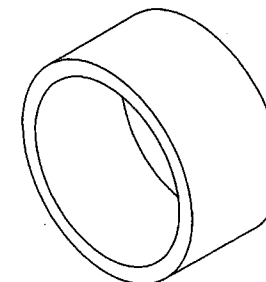
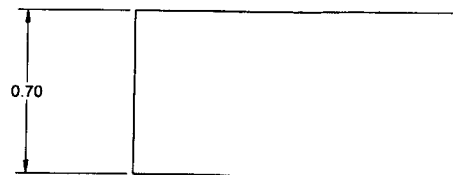
REL 2015 JUL 02

NOTES:

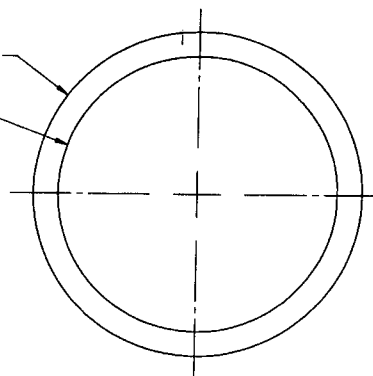
- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR
 QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
 OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
 OR ASTM B211 OR ASTM B221
 REF. DART SPEC. M6061T6R1.500
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.03 lbs

APPROVED

DESIGN	VS	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	VS		
CHECKED	RF	DRAWING NO. D4410	REV. E
MFG. APPR.	EPDMA		SHEET 10 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
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$\phi 1.399^{+0.000}_{-0.003}$
 $\phi 1.187^{+0.005}_{-0.000}$



D4410-13 212 SHIM

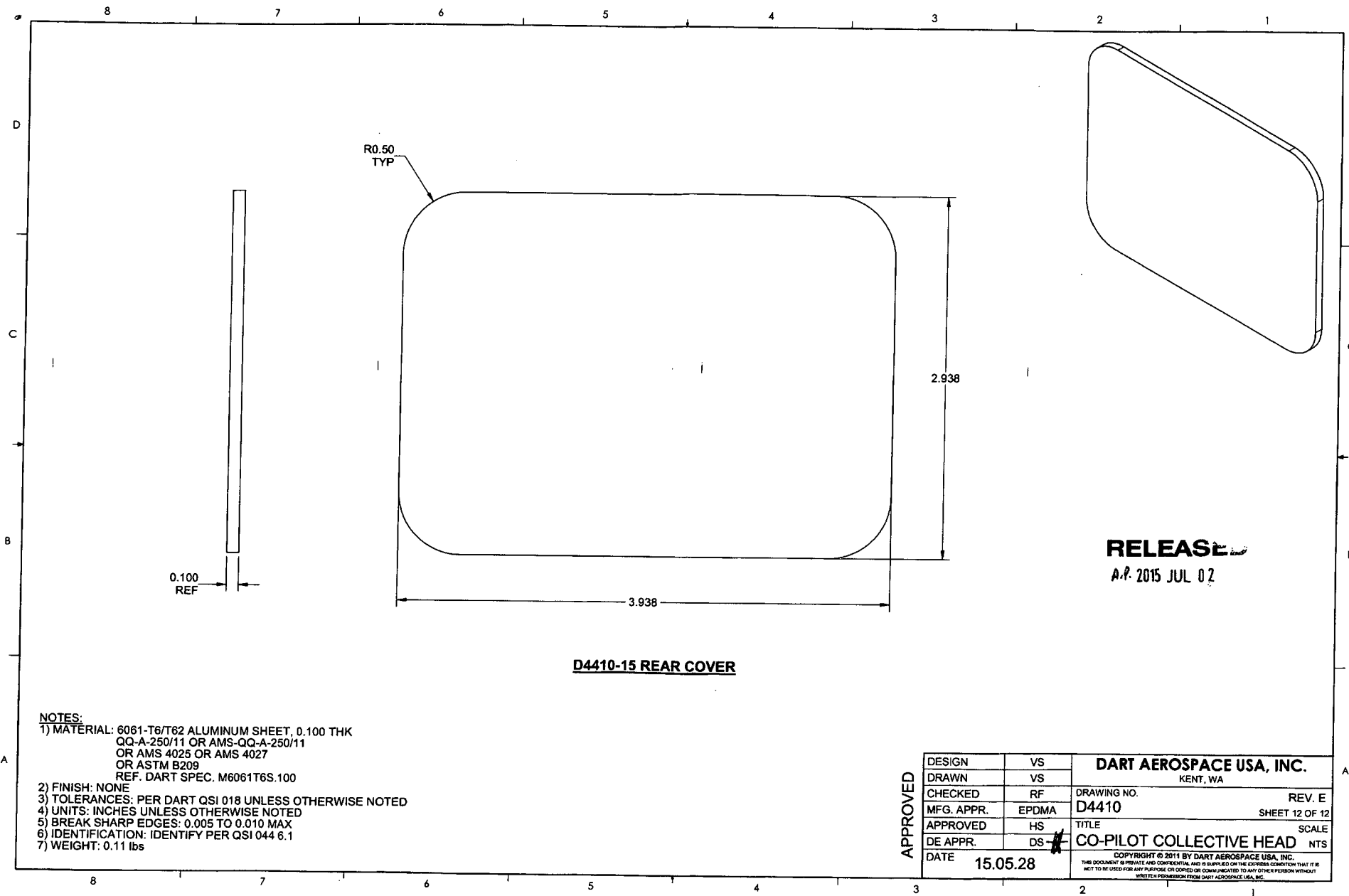
RELEASED
A.P. 2015 JUL 02

NOTES:

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR
 QQ-A-225/8 OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116)
 OR QQ-A-200/8 OR AMS-QQ-A-200/8 (OR AMS 4160)
 OR ASTM B211 OR ASTM B221
 REF. DART SPEC. M6061T6R1.500
- 2) FINISH: ANODIZE BLACK PER MIL-A-8625F TYPE I OR IB OR IC OR II OR IIB CLASS 2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.03 lbs

APPROVED

DESIGN	VS	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	VS		
CHECKED	RF	DRAWING NO. D4410	REV. E
MFG. APPR.	EPDMA		SHEET 11 OF 12
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
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RELEASE
A.P. 2015 JUL 02

- NOTES:**
- 1) MATERIAL: 6061-T6/T62 ALUMINUM SHEET, 0.100 THK
 QQ-A-250/11 OR AMS-QQ-A-250/11
 OR AMS 4025 OR AMS 4027
 OR ASTM B209
 REF. DART SPEC. M6061T6S.100
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
 - 7) WEIGHT: 0.11 lbs

APPROVED	DESIGN	VS	DART AEROSPACE USA, INC. KENT, WA	
	DRAWN	VS		
	CHECKED	RF	DRAWING NO.	REV. E
	MFG. APPR.	EPDMA	D4410	SHEET 12 OF 12
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	CO-PILOT COLLECTIVE HEAD	NTS
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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO30559**

Purchase Order Date 11/24/2015

PO Print Date 11/26/2015

Page Number 1 of 3

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAKED

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	138553	D4410-043 CO-PILOT HEAD REV. E	11/26/2015 Yes 11/26/2015 BLACK ANODIZE AS PER MIL-A-8625F TYPE I OR IB/IC/II OR IIB CLASS 2		1.00 ✓	\$41.66	\$41.66
						Line Total:	\$41.66
2	138435	D4726-1 HANDLE REV. A	11/30/2015 Yes 11/30/2015 BLACK ANODIZE AS PER MIL-8625F, TYPE III CLASS 2		12.00	\$10.94	\$131.28
						Line Total:	\$131.28
3	139101	D5355-043 AFT.SUPPORT REV. PA6	11/30/2015 Yes 11/30/2015 BLACK ANODIZE AS PER MIL-A-8625F TYPE I OR IB/IC/II OR IIB CLASS 2		2.00	\$41.66	\$83.32

Note:

11/26/2015



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 64016

Date: 26-Nov-15

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
1 ea	Part: D4410-043 CO-PILOT HEAD BLACK ANODIZE MIL-A-8625 TYPE II CLASS 2 Job: 20150859	Rev: E	PO: PO30559 Line:
Certificate of Conformance A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order. ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY DATE: <u>26/11/15</u> CERTIFIED SIGNATURE: <u>[Signature]</u> RECEIVER SIGNATURE: <u>Sonia Houffle</u> 1511-26			